

WHAT IS CLAIMED IS:

1. An ink jet printer comprising:

a print head having an array of nozzles from which ink droplets of adjustable volume are emitted;

a mechanism adapted to individually adjust the volume of the emitted ink droplets, said mechanism having a first state wherein the emitted droplets of selected nozzles are of a predetermined small volume and a second state wherein the emitted droplets of selected nozzles are of a predetermined large volume; and

a controller adapted to selectively switch the mechanism between its first and its second states such that ink droplets of said predetermined large volume are not simultaneously emitted from adjacent ones of said nozzles.

2. An ink jet printer as set forth in Claim 1, wherein the nozzle array is linear.

3. An ink jet printer as set forth in Claim 1, wherein said mechanism adapted to adjust the volume of the emitted ink droplets includes a heater positioned proximate said nozzle, said heater being adapted to selectively create said ink droplets having small volume and said ink droplets having large volume.

4. An ink jet printer comprising:

a print head having an array of nozzles from which streams of ink are emitted, said ink streams breaking up into droplets of adjustable volume moving along a path;

a mechanism adapted to individually adjust the volume of the emitted ink droplets, said mechanism having a first state wherein the emitted droplets of selected nozzles are of a predetermined small volume and a second state wherein the emitted droplets of selected nozzles are of a predetermined large volume; and

a controller adapted to selectively switch the mechanism between its first and its second states such that ink droplets of said predetermined large volume from adjacent ones of said nozzles do not simultaneously occur.

5. An ink jet printer as set forth in Claim 4, further comprising a droplet deflector which uses a flow of gas positioned at an angle greater than zero with respect to said ink droplet path, said droplet deflector being adapted to interact with said ink droplets, thereby separating ink droplets of said predetermined small volume from ink droplets of said predetermined large volume.

6. An ink jet printer as set forth in Claim 5, wherein said droplet deflector includes a recovery plenum positioned adjacent said stream of ink droplets operable to collect and remove ink droplets.

7. An ink jet printer as set forth in Claim 1, wherein said droplets are emitted substantially simultaneously from all the nozzles of the array.

8. A method of ink jet printing using a print head having an array of nozzles from which ink droplets of adjustable volume are emitted; individually adjusting the volume of the emitted ink droplets such that the emitted droplets of selected nozzles are of predetermined small volume or of a predetermined large volume; and

controlling the size of the ink droplets such that ink droplets of said predetermined large volume are not simultaneously emitted from adjacent ones of said nozzles.